AMENDMENTS TO THE CLAIMS

1. (Original) A method for processing 2D image data for reconstructing 3D image data therefrom, the method comprising:

receiving a plurality of 2D images acquired at different angles of view; and

iteratively processing the received 2D images to reconstruct 3D image data therefrom.

2. (Original) The method of claim 1 wherein said 3D image data comprises at least one cross-section of an object under inspection.

3. (Original) The method of claim 1 wherein said iteratively processing comprises:

processing the received 2D images in accordance with a conjugate gradient algorithm.

4. (Original) The method of claim 1 wherein the 2D images are not required to be received in a pre-defined order.

5. (Original) The method of claim 4 wherein said iteratively processing comprises:

processing said 2D images as they are received.

6. (Original) The method of claim 4 wherein said iteratively processing comprises:

processing 2D images in the order in which they are received.

7. (Original)The method of claim 1 further comprising:

determining an optimal regularization parameter.

8. (Original) The method of claim 7 further comprising:

using the determined optimal regularization parameter in said iteratively processing.

9. (Original) The method of claim 7 wherein said determining an optimal regularization parameter comprises:

using an L-curve to determine the optimal regularization parameter.

10. (Original) The method of claim 1 further comprising:

determining an optimal number of iterations to perform in said iteratively processing.

11. (Canceled)

12. (Currently Amended) The method of ~~claim 11~~ claim 10 wherein said determined optimal number of iterations comprises 5 iterations.

13. (Original) The method of claim 1 further comprising:

a radiographic imaging system capturing said plurality of 2D images at said different angles of view for an object under inspection.

14. (Original) The method of claim 13 wherein said radiographic imaging system uses cone-beam tomography to capture said plurality of 2D images.

15. (Original) A system for processing 2D image data for reconstructing 3D image data therefrom, the system comprising:

means for receiving a plurality of 2D images acquired at different angles of view; and

means for iteratively processing the received 2D images to reconstruct 3D image data therefrom.

16. (Original) The system of claim 15 wherein said means for iteratively processing comprises:

means for processing the received 2D images in accordance with a conjugate gradient algorithm.

17. (Original) The system of claim 15 wherein said means for iteratively processing does not require that the received 2D images be received in a pre-defined order.

18. (Original) A system for processing 2D image data for reconstructing 3D image data therefrom, the system comprising:

an imaging system operable to capture a plurality of 2D images at different angles of view; and

a reconstruction processor communicatively coupled to the imaging system, said reconstruction processor operable to receive the plurality of captured 2D images and iteratively process the received 2D images to reconstruct 3D image data therefrom in accordance with a conjugate gradient algorithm.

19. (Original) The system of claim 18 wherein the reconstruction processor does not require the 2D images to be received in a pre-defined order.

20. (Original) The system of claim 18 wherein the reconstruction processor does not require a pre-defined order of capturing said different angles of view.